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BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Application Number: 10/669,475
Filing Date: September 23, 2003
Appellant(s): GARDNER ET AL.

Thomas Thibault
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 1/30/2009 appealing from the Office action mailed 7/23/2008.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

6,038,529	Harada	3-2000
6,408,272	White et al.	6-2002

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1-35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Harada (6,038,529) in view of (White et al., (6,408,272).

As per claim 1, Harada teaches an apparatus for use in transmitting digital data through an audio channel the apparatus comprising:

a data coder configured to convert the digital data into one or more types of sound parameters (Figs.3-4, Col.4. line 51-Col.5, line 52); and

Harada, while teaching a data coder that is configured to convert the one or more types of sound parameters into acoustic sound waves to acoustically transfer the digital

data does not specifically teach a sound synthesizer coupled to the data coder. White et al., do teach a sound synthesizer that is coupled that is coupled to a transceiver that does extract speech parameters and receives and transmits acoustic data (Fig.2, items 28, 34 and 42). Therefore it would have been obvious to one with ordinary skill in the art at the time of invention to incorporate the processing component of White et al., in the apparatus of Harada, because this would provide the user with the capability to receive, and respond to, directions, commands, instructions, or requests issued verbally by the human user (White et al., Col.1, lines 36-38).

As per claim 2, Harada teaches the apparatus of claim 1, further comprising: a storage medium configured to store one or more sets of relationships between bit patterns and one or more types of sound parameters; and wherein the data coder is configured to convert the digital data into the one or more types of sound parameters in accordance with the one or more sets of relationships between the bit patterns and the one or more types of sound parameters (Figs.3-4, Col.4. line 51-Col.5, line 52).

As per claim 3, Harada teaches the apparatus of claim 2, wherein the storage medium comprises a look up table that predefines the one or more sets of relationships between the bit patterns and the one or more types of sound parameters (Col.9, line 24 – Col.10, line 62).

As per claim 4, Harada teaches the apparatus of claim 1, wherein a sound parameter represents one value or a range of values representative of user authentication information (Figs.3-4, Col.4. line 51-Col.5, line 52).

As per claim 5, Harada teaches the apparatus of claim 1, wherein the one or more sound parameters comprises at least one speech parameter representative of artificial speech (Figs.3-4, Col.4. line 51-Col.5, line 52).

As per claim 6, Harada teaches an apparatus for use in receiving digital data through an audio channel, the apparatus comprising:

a sound analyzer configured to receive sound and to extract one or more types of sound parameters from the received sound (Figs.3-4, Col.4. line 51-Col.5, line 52).

Harada, while teaching a sound analyzer that is configured to convert the one or more types of sound parameters into acoustic sound waves to acoustically transfer the digital data does not specifically teach a sound synthesizer coupled to the data coder. White et al., do teach a sound synthesizer that is coupled that is coupled to a transceiver that does extract speech parameters and receives and transmits acoustic data (Fig.2, items 28, 34 and 42). Therefore it would have been obvious to one with ordinary skill in the art at the time of invention to incorporate the processing component of White et al., in the apparatus of Harada, because this would provide the user with the capability to receive, and respond to, directions, commands, instructions, or requests issued verbally by the human user (White et al., Col.1, lines 36-38).

As per claim 7, Harada teaches the apparatus of claim 6, further comprising: a storage medium configured to store one or more sets of relationships between bit patterns and one or more types of sound parameters; and wherein the data decoder is configured to convert the extracted one or more types of sound parameters into the digital data in accordance with the one or more sets of relationships between the bit

patterns and the one or more types of sound parameters (Figs.3-4, Col.4. line 51-Col.5, line 52).

As per claim 8, Harada teaches the apparatus of claim 7, wherein the storage medium comprises a look up table that predefines one or more sets of relationships between the bit patterns and the one or more types of sound patterns (Col.9, line 24 – Col.10, line 62).

As per claim 9, Harada teaches the apparatus of claim 6, wherein a sound parameter represents one value or a range of values representative of user authentication information (Figs.3-4, Col.4. line 51-Col.5, line 52).

As per claim 10, Harada teaches the apparatus of claim 6, wherein the extracted one or more sound parameters comprise at least one speech parameter representative of artificial speech (Figs.3-4, Col.4. line 51-Col.5, line 52).

As per claim 11, Harada teaches a method for use in transmitting digital data through an audio channel, the method comprising: converting digital data to be transmitted into one or more types of sound parameters; and converting the one or more sound parameters into acoustic sound waves to acoustically transfer the digital data (Figs.3-4, Col.4. line 51-Col.5, line 52).

As per claim 12, Harada teaches the method of claim 11, further comprising: storing one or more sets of relationships between bit patterns and one or more types of sound parameters; and wherein converting digital data to be transmitted comprises converting the digital data into the one or more types of sound parameters in

accordance with the one or more sets of relationships between the bit patterns and the one or more types of sound parameters (Figs.3-4, Col.4. line 51-Col.5, line 52).

As per claim 13, Harada teaches the method of claim 12, wherein storing the one or more sets of relationships comprises storing a look up table that predefines one or more sets of relationships between the bit patterns and the one or more types of sound parameters (Col.9, line 24 – Col.10, line 62).

As per claim 14, Harada teaches the method of claim 11, wherein a sound parameter represents one value or a range of values representative of user authentication information (Figs.3-4, Col.4. line 51-Col.5, line 52).

As per claim 15, Harada teaches the method of claim 11, wherein the one or more sound parameters comprises at least speech parameter representative of artificial speech (Figs.3-4, Col.4. line 51-Col.5, line 52).

As per claim 16, Harada teaches a method for use in receiving digital data through an audio channel, the method comprising: extracting one or more types of sound parameters from received acoustic sound waves; and converting the extracted one or more types of sound parameters into the digital data (Figs.3-4, Col.4. line 51-Col.5, line 52).

As per claim 17, Harada teaches the method of claim 16, further comprising: storing one or more sets of relationships between bit patterns and the one or more types of sound parameters; and wherein converting the extracted one or more types of sound parameters comprises converting the extracted one or more types of sound parameters into the digital data in accordance with the one or more sets of relationships

between the bit patterns and the one or more types of sound (Figs.3-4, Col.4. line 51-Col.5, line 52).

As per claim 18, Harada teaches the method of claim 17, wherein storing the one or more sets of relationships comprises storing a look up table that predefines the one or more sets of relationships (Col.9, line 24 – Col.10, line 62).

As per claim 19, Harada teaches the method of claim 16, wherein a sound parameter represents one value or a range of values representative of user authentication information (Figs.3-4, Col.4. line 51-Col.5, line 52).

As per claim 20, Harada teaches the method of claim 16, wherein the extracted one or more sound parameters comprise at least one speech parameter representative of artificial speech (Figs.3-4, Col.4. line 51-Col.5, line 52).

As per claim 21, Harada teaches an apparatus for use in transmitting digital data through an audio channel, the apparatus comprising: means for converting digital data to be transmitted into one or more types of sound parameters; and means for converting the one or more types of sound parameters into acoustic sound waves to acoustically transfer the digital data (Figs.3-4, Col.4. line 51-Col.5, line 52).

As per claim 22, Harada teaches the apparatus of claim 21, further comprising: means for storing one or more sets of relationships between bit patterns and one or more types of sound parameters; and wherein the means for converting converts the digital data into the one or more types of sound parameters in accordance with the one or more sets of relationships between the bit patterns and the one or more types of sound parameters (Figs.3-4, Col.4. line 51-Col.5, line 52).

As per claim 23, Harada teaches the apparatus of claim 22, wherein the means for storing stores a look up table that predefines one or more sets of relationships between the bit patterns and the one or more types of sound parameters (Col.9, line 24 – Col.10, line 62).

As per claim 24, Harada teaches an apparatus for use in receiving digital data through an audio channel, the apparatus comprising: means for extracting one or more types of sound parameters from received acoustic sound waves; and means for converting the extracted one or more types of sound parameters into the digital data (Figs.3-4, Col.4. line 51-Col.5, line 52).

As per claim 25, Harada teaches the apparatus of claim 24, further comprising: means for storing one or more sets of relationships between bit patterns and one or more types of sound parameters; and wherein the means for converting converts the extracted one or more types of sound parameters into the digital data in accordance with the one or more sets of relationships between the bit patterns and the one or more types of sound parameters (Figs.3-4, Col.4. line 51-Col.5, line 52).

As per claim 26, Harada teaches the apparatus of claim 25, wherein the means for storing stores a look up table that predefines the one or more sets of relationships between the one or more types of sound parameters (Col.9, line 24 – Col.10, line 62).

As per claim 27, Harada teaches a machine readable medium used for transmitting digital data through an audio channel, the machine readable medium comprising: codes for converting digital data to be transmitted into one or more types of sound parameters; and codes for converting the one or more types of sound

parameters into acoustic sound waves to acoustically transfer the digital data (Figs.3-4, Col.4. line 51-Col.5, line 52).

Harada, while teaching a sound analyzer that is configured to convert the one or more types of sound parameters into acoustic sound waves to acoustically transfer the digital data does not specifically teach a sound synthesizer coupled to the data coder. White et al., do teach a sound synthesizer that is coupled that is coupled to a transceiver that does extract speech parameters and receives and transmits acoustic data (Fig.2, items 28, 34 and 42). Therefore it would have been obvious to one with ordinary skill in the art at the time of invention to incorporate the processing component of White et al., in the apparatus of Harada, because this would provide the user with the capability to receive, and respond to, directions, commands, instructions, or requests issued verbally by the human user (White et al., Col.1, lines 36-38).

As per claim 28, Harada teaches the medium of claim 27, further comprising: one or more sets of relationships between bit patterns and one or more types of sound parameters; and wherein the codes for converting converts the digital data into the one or more types of sound parameters in accordance with the one or more sets of relationships between the bit patterns and the one or more types of sound parameters (Figs.3-4, Col.4. line 51-Col.5, line 52).

As per claim 29, Harada teaches a machine readable medium used for receiving digital data through an audio channel, the machine readable medium comprising: codes for extracting one or more types of sound parameters from received compressed sound;

and codes for converting the extracted one or more types of sound parameters into the digital data (Figs.3-4, Col.4. line 51-Col.5, line 52).

As per claim 30, Harada teaches the medium of claim 29, further comprising: one or more sets of relationships between bit patterns and one or more types of sound parameters; and wherein the codes for converting converts the extracted one or more types of sound parameters into the digital data in accordance with the one or more sets of relationships between the bit patterns and the one or more types of sound parameters (Figs.3-4, Col.4. line 51-Col.5, line 52).

As per claim 31, Harada teaches the apparatus for use in transmitting and receiving digital data through an audio channel, the apparatus comprising: means for converting digital data to be transmitted into one or more types of sound parameters; means for generating acoustic sound waves based on the one or more types of sound parameters; means for extracting one or more types of sound parameters from received acoustic sound waves; and means for converting the extracted one or more types of sound parameters into the digital data (Figs.3-4, Col.4. line 51-Col.5, line 52).

Harada, while teaching a sound analyzer that is configured to convert the one or more types of sound parameters into acoustic sound waves to acoustically transfer the digital data does not specifically teach a sound synthesizer coupled to the data coder. White et al., do teach a sound synthesizer that is coupled that is coupled to a transceiver that does extract speech parameters and receives and transmits acoustic data (Fig.2, items 28, 34 and 42). Therefore it would have been obvious to one with ordinary skill in the art at the time of invention to incorporate the processing component

of White et al., in the apparatus of Harada, because this would provide the user with the capability to receive, and respond to, directions, commands, instructions, or requests issued verbally by the human user (White et al., Col.1, lines 36-38).

As per claim 32, Harada teaches the apparatus of claim 31, further comprising: means for storing one or more sets of relationships between bit patterns and one or more types of sound parameters; and wherein the means for converting converts the digital data into the one or more types of sound parameters in accordance with the one or more sets of relationships between the bit patterns and the one or more types of sound parameters, and wherein the means for converting converts the extracted one or more types of sound parameters into the digital data in accordance with the one or more sets of relationships between the bit patterns and the one or more types of sound parameters (Figs.3-4, Col.4. line 51-Col.5, line 52).

As per claim 33, Harada teaches the apparatus of claim 32, wherein the means for storing stores a look up table that predefines one or more sets of relationships between the bit patterns and the one or more types of sound parameters (Col.9, line 24 – Col.10, line 62).

As per claim 34, Harada teaches a processor for use in transmitting digital data through an audio channel, the processor comprising: a processor circuit configured to :convert digital data to be transmitted into one or more types of sound parameters, and converting the one or more types of sound parameters into acoustic sound Waves to acoustically transfer the digital data (Figs.3-4, Col.4. line 51-Col.5, line 52).

As per claim 35, Harada teaches a processor for use in receiving digital data through an audio channel, the processor comprising: a processing circuit configured to: extract one or more types of sound parameters from received acoustic sound waves, and, convert the extracted one or more types of sound parameters into the digital data (Figs.3-4, Col.4. line 51-Col.5, line 52).

(10) Response to Argument

Arguments presented by the applicant:

A. Whether claims 27-30 are directed toward non-statutory subject matter under 35 U.S.C.101.

Applicant argues that claims 27-30, they believe are 35 U.S.C. 101 compliant. Applicant's argument is persuasive and therefore, 35 U.S.C. 101 rejection is withdrawn.

B. Whether claims 1-35 are unpatentable over Harada (US 6,038,529) in view of White (US 6,408,272).

Applicant argues that the references do not teach the claimed "acoustically transfer" the digital data. Examiner disagrees. The term "acoustically" is not clearly defined in the specification. Giving the term "acoustically transfer" the broadest reasonable interpretation, the combination of Harada in view of White et al., do teach a sound synthesizer that is coupled to a transceiver that transmits and receiver acoustic data (White: Fig.2, items 28, 34, and 42).It would have been obvious to one with ordinary skill in the art at the time of invention, because this would provide the user with

the capability to receive and respond to, directions, commands, instructions, or requests issued verbally by the human user.

Applicant also argues that Harada fails to teach a receiver comprising "a sound synthesizer configured to receive acoustic sound waves and to extract one or more types of sound parameters from the received acoustic sound waves." Examiner disagrees. In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

Applicant's arguments do not comply with 37 CFR 1.111(c) because they do not clearly point out the patentable novelty which he or she thinks the claims present in view of the state of the art disclosed by the references cited or the objections made. Further, they do not show how the amendments avoid such references or objections.

Applicant's arguments fail to comply with 37 CFR 1.111(b) because they amount to a general allegation that the claims define a patentable invention without specifically pointing out how the language of the claims patentably distinguishes them from the references.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

/Vijay B. Chawan/

Primary Examiner, Art Unit 2626

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